1998

Mineral Facts for Nebraska, Excluding Oil and Gas

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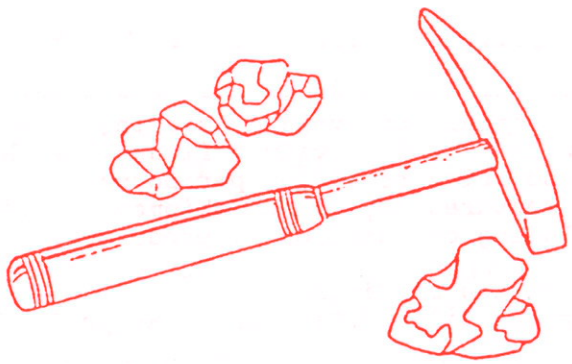
NEBRASKA GEONOTES

MINERAL FACTS FOR NEBRASKA

Raymond R. Burchett



NEBRASKA GEOLOGICAL SURVEY

Conservation and Survey Division
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln

May 1994

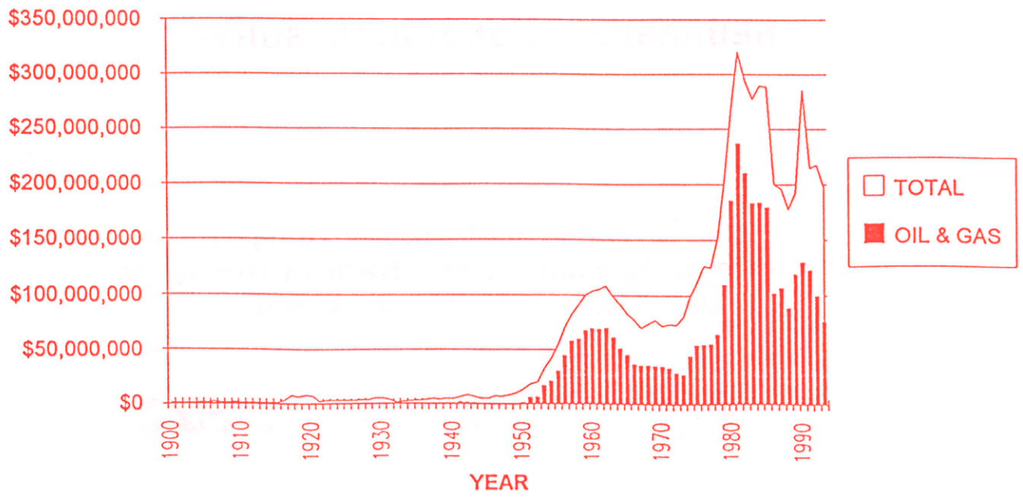
Table 1. --Preliminary data on mineral production[1] in Nebraska during 1993

	1993 Quantity	1993 Value, thousands dollars
Clays.....thousand short tons..	171[p]	848[p]
Gemstones.....do.....	W	W
Lime.....do.....	33[p]	1,981[p]
Sand and gravel:		
Construction.....do.....	13,700[p]	41,100[p]
Industrial.....do.....	W	W
Stone (crushed).....do.....	6,700[p]	33,500[p]
Combined value of cement, sand and gravel values indicated by symbol W.....	XX	37,318[p]
Natural gas.....million cubic feet..	2,114	3,827
Petroleum.....thousand 42-gallon barrels..	4,868	72,639
Uranium (yellowcake)....thousand pounds.....	600[p]	6,000[e]
Total.....	XX	$197,203[p]

p Preliminary. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" figure. XX Not applicable.
e Estimated on spot price of $10.00 per pound
1 Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

Source of data: U.S Bureau of Mines
Nebraska Oil and Gas Conservation Commission

NEBRASKA MINERAL VALUE



MINERAL FACTS FOR NEBRASKA (excluding oil and gas)

Raymond R. Burchett

The mineral resources of Nebraska are used in a variety of ways, either directly or as products made from them. Although often not appreciated, mineral resources contribute significantly to the state's economy. The mineral resources of Nebraska are divided into industrial minerals and oil and gas.

Industrial minerals is a group term that includes nonmetallic and metallic minerals but excludes oil and gas. Todays active mining of the nonmetallics in Nebraska consists of cement, chalk, clay, gemstones, shale, limestone, sand and gravel, sandstone and siltstone. The only metallic mineral mined is uranium.

Cement - (Portland cement) is made from limestone or chalk, clay or shale, and gypsum. A blend of these materials is ground and mixed and then heated or "burned" in large rotary furnaces, called kilns. The resulting clinker is ground to a powder after it has cooled and is the cement mixed with limestone or sand and gravel aggregate and water to make concrete used in all phases of construction.

Chalk - soft limestone. Mixed with shale to make cement. Also used for agricultural lime and some building stone.

Clay or shale - earthy materials consisting of, alumina, silica, and water. Used to make brick, tile and other clay products. Also blended with limestone and gypsum to make cement.

Gemstones - the term gemstones is a "catch-all" or group name in Nebraska for minerals, rocks, and gemstones. A mineral is an inorganic substance having characteristic physical properties and a definite chemical composition, occurring naturally, and is homogeneous. Gemstones are naturally occurring substances usually colorful, durable, and will take a high polish. Rocks generally consist of certain groups of minerals.

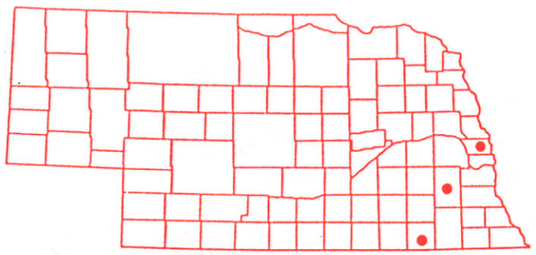
Limestone - rock consisting of carbonate of lime. It is crushed primarily for all phases of construction aggregates. It is also mixed and burned with clay or shale and gypsum to make cement. Finely ground limestone is used as additives or fillers. Burned limestone is used to make lime for sugar beet refining.

Sand and gravel - mixture of various rocks and minerals used primarily for aggregates in construction.

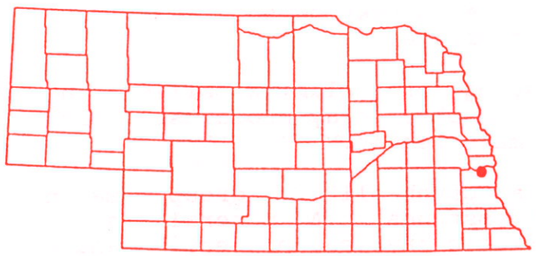
Sandstone or siltstone - mixture of various minerals and cemented to form a soft to hard rock. May be used as a building stone or crushed for road surfacing material.

Uranium - radioactive metallic element that is mined and the ore is milled into yellowcake (uranium oxide U_3O_8). It is used in nuclear power plants, iron smelting and x-rays.

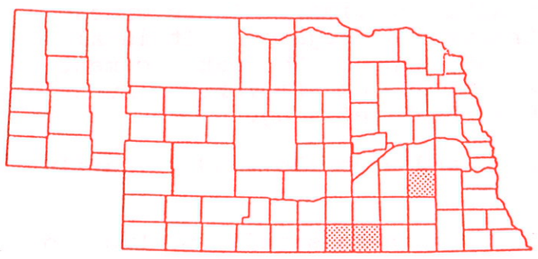
Preliminary figures for industrial mineral production in Nebraska during 1993 total about $120.5 million dollars.



There were 3 active brick plants in Nebraska during 1993.

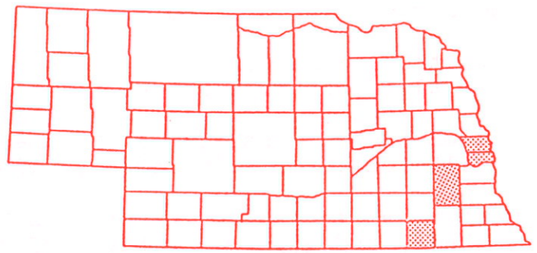


There was only 1 active cement plant in Nebraska during 1993.



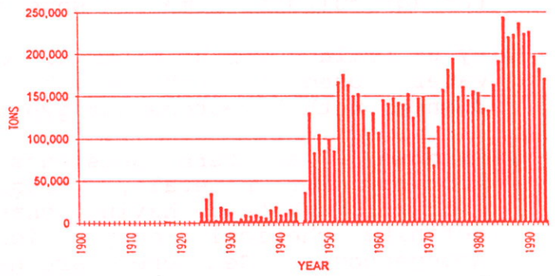
Chalk or chalky limestone was quarried in three Nebraska counties during 1993.

Mineral production in decreasing order of value in Nebraska for 1993 includes: construction sand and gravel, portland cement, crushed limestone, uranium, clays, lime, masonry cement, and industrial sand and gravel.



Clay or shale was produced in 4 counties in Nebraska, during 1993.

CLAY OR SHALE PRODUCTION

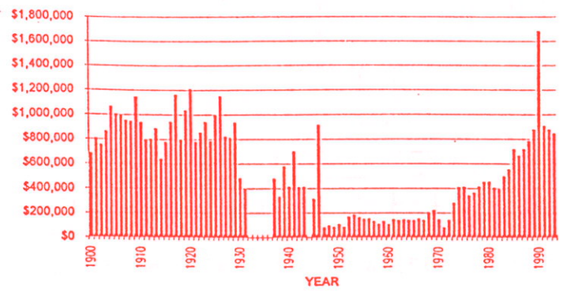


Clay and shale production in Nebraska for 1993 was 189,000 tons.

Nebraska's biggest clay and shale producing year was 1985 with 244,000 tons produced in a 12-month period.

As of January 1, 1994, a cumulative total of 7,622,315 tons of clay or shale have been produced in Nebraska.

CLAY OR SHALE VALUE

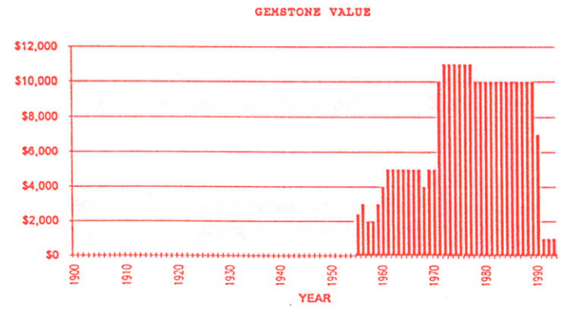


Clay and shale value in Nebraska for 1993 was $848,000.

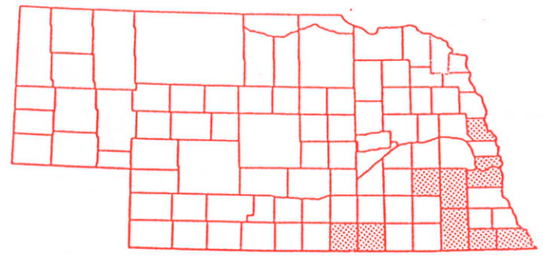
The value of clay and shale produced in Nebraska was the greatest in 1990 with a total of $1,685,000.

As of January 1, 1993, the cumulative value of clay and shale produced in the State was $49,449,669.

GEMSTONE VALUE

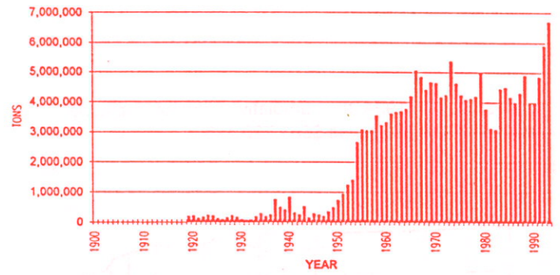


The value of gemstones in Nebraska in the last 3 years is estimated at $1,000 per year.



Limestone was produced in 10 counties at 16 plants in Nebraska during 1993.

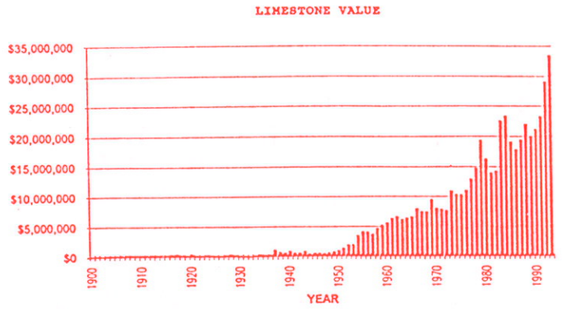
LIMESTONE PRODUCTION



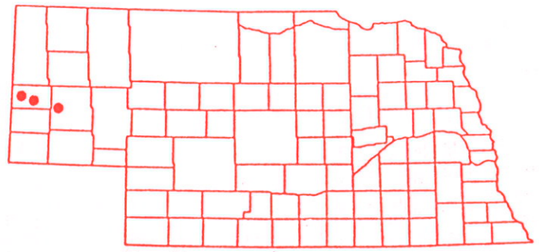
Limestone production in Nebraska for 1993 was 6,700,000 tons.

Nebraska's biggest limestone producing year was 1993.

As of January 1,1994, a cumulative total of 179,549,954 tons of limestone have been produced in Nebraska.



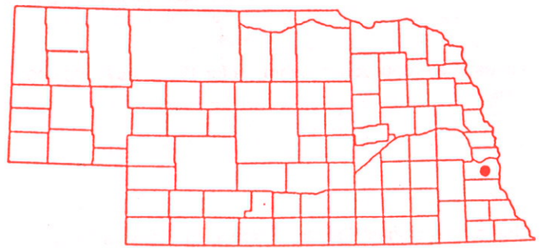
Limestone value in Nebraska for 1993 was $33,500,000



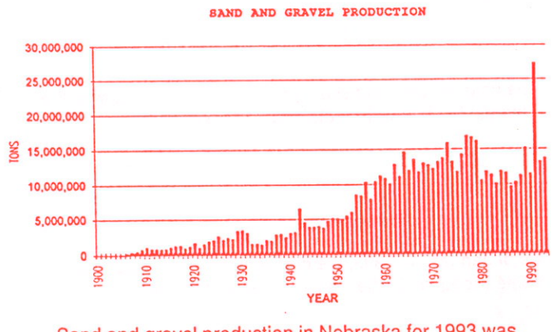
There were 3 active limekilns in Nebraska during 1993.

The value of limestone produced in Nebraska was the greatest in 1993.

As of January 1, 1994, the cumulative value of limestone produced in the State was $531,720,496.



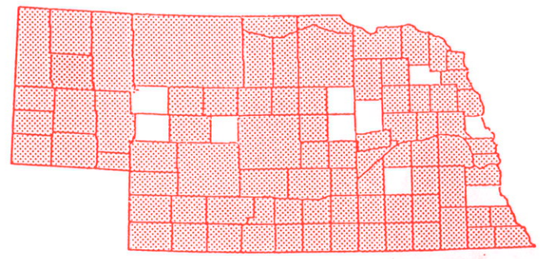
There was one active limestone pelletizing plant in Nebraska, during 1993.



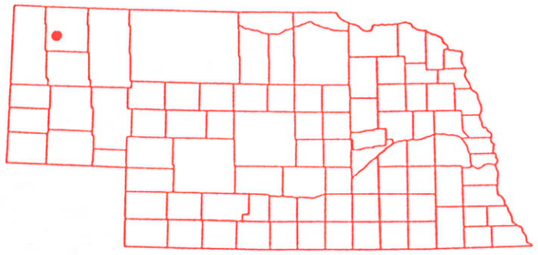
Sand and gravel production in Nebraska for 1993 was 13,700,000 tons.

Nebraska's biggest sand and gravel producing year was 1991 with 27,300,000 tons produced in a 12-month period.

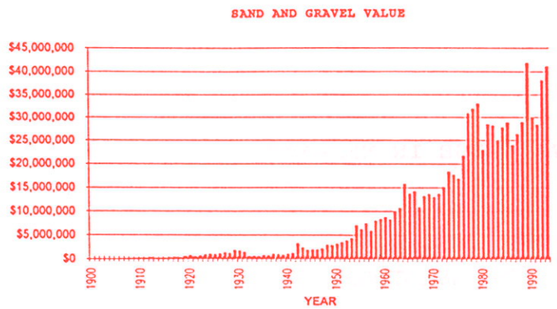
As of January 1, 1994 a cumulative total of 623,742,905 tons of sand and gravel have been produced in Nebraska.



Sand, gravel, and silt were produced in all but 8 counties from 663 active, sand, gravel, and silt pits during 1993.



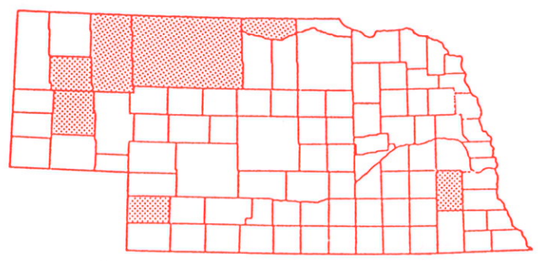
A new uranium mine started up in April, 1991.



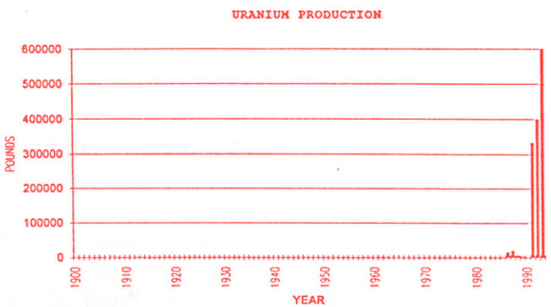
The estimated value of sand and gravel produced in Nebraska during 1993 is $41,100,000.

The value of sand and gravel produced in Nebraska was the greatest in 1989 with a total of $41, 800,000.

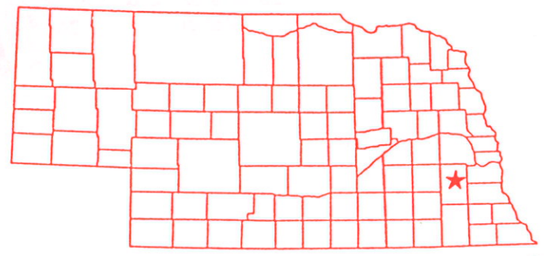
As of January 1,1994, the cumulative value of sand and gravel produced in the State was $853,290,464.



Sandstone was produced in 7 counties in Nebraska, during 1993.

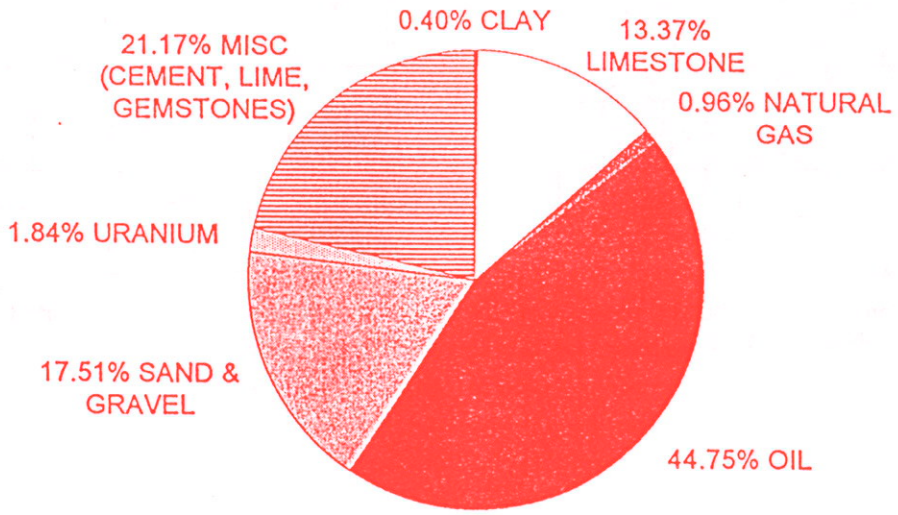


Uranium production is estimated at 600,000 pounds of yellowcake (U_3O_8) for 1993.

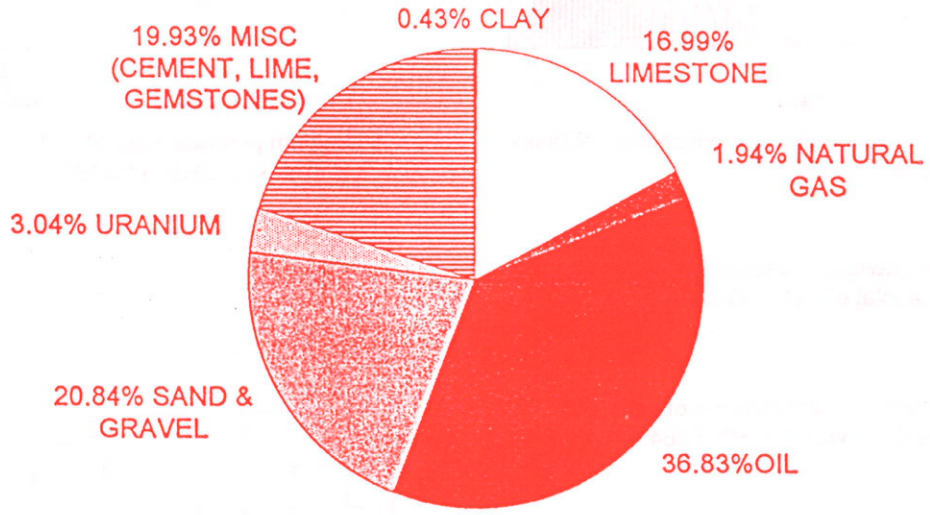


Extensive files of geologic information, electric logs, and samples of wills drilled are kept by the Nebraska Geological Survey, Conservation and Survey Division, Institute of Agriculture and Natural Resources, 113 Nebraska Hall, 901 N. 17th Street, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0517, (402) 472-3471.

1992 MINERAL VALUE IN NEBRASKA



1993 PRELIMINARY MINERAL VALUE IN NEBRASKA



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